

REMARKS

The rejections of Claims 66-105 under the judicially created doctrine of double patenting over Claims 1-62 of U.S. 6,309,545B1, and over Claims 1-76 of U.S. 6,299,778B1, are respectfully traversed. Submitted herewith is a Terminal Disclaimer over said patents. Accordingly, it is respectfully requested that the rejections be withdrawn.

The rejections of Claims "66-86-95, 97-105"¹ under 35 U.S.C. §103(a) as unpatentable over U.S. 5,376,442 (Davidson et al) is respectfully traversed. Davidson et al disclose a composite membrane comprising an inorganic support having interstices and porous inorganic films of sintered non-metallic particles carried by the support and bridging the interstices thereof (column 1, lines 23-27). In Davidson et al, a relatively coarsely porous (relatively large pores) support carries a relatively less porous film bridging the coarse pores of the support, wherein the support and film are coplanar. Since the interstices in Davidson et al are required to be bridged, it is clear that the structure of Davidson et al's composite is different from that herein claimed. The presently-claimed composite requires that the at least one inorganic component be contained both on at least one side of the carrier and inside the carrier. Indeed, Davidson et al discloses that an advantage of their composite membrane is that the film is generally coplanar with the porous support, so that bending the membrane does not necessarily involve stretching the film (column 1, line 65 to column 2, line 3). As disclosed therein, it is ensured that the film bridging each pore is more nearly coplanar with the sheet.

In addition to the above differences, Davidson et al appear to require the presence of an organic binder in the sense that crack-free coatings do not appear to be obtainable without the binder (column 7, lines 66 ff). Nor does Davidson et al disclose or suggest two different populations of components making up the sintered non-metallic particles of their films.

¹ If the present response does not result in allowance of all the claims, the Examiner is respectfully requested to clarify the rejected claims.

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While Davidson et al discloses the use of sols as one way to produce their sintered non-metallic particle films, and appears to prefer alumina or titania precursors when sols are used (which are excluded in new Claims 106 and 107), there is no disclosure or suggestion in Davidson et al to combine, in effect, a precursor-containing sol, and a compound *per se*, to make up their sintered non-metallic particles.

For all the above reasons, it is respectfully requested that the rejection over Davidson et al be withdrawn.

All of the presently pending claims in this application are believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

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